



Thumb Base Pain Exercise Booklet

Information
and an
Exercise Programme
specifically for people with
Thumb Base Pain





Thumb Base Pain

You have been given this booklet because you have pain or discomfort in your thumb joint.

Pain at the base of your thumb can be due to a number of reasons, one of which can be thumb base Osteoarthritis. Pain at the base of your thumb can affect many aspects of your everyday life. This booklet has been designed with the help of clinicians and patients who have pain at the base of the thumb. It describes a common cause of pain in this area, Osteoarthritis.

This booklet focuses specifically on thumb base pain and provides a programme of exercise devised with the help of national and international therapy clinicians and is supported by published research. You have also been given a Joint Protection Booklet which discusses Osteoarthritis generally and presents ways to enable you to carry on your normal life as much as possible whilst reducing pain and protecting your joints from further damage.

This booklet contains the following sections:

1. Causes of Thumb Osteoarthritis
2. Symptoms of Thumb Osteoarthritis
3. Treatment of Thumb Osteoarthritis
4. Hand Exercises
5. Exercise Goals
6. Barriers and Facilitators to doing Exercise
7. Exercise Diary

Causes of Thumb Osteoarthritis

Osteoarthritis in the carpometacarpal joint (CMC joint) at the base of the thumb is the most common cause of pain in this area.

The CMC joint is formed where the metacarpal bone of the thumb meets the trapezium bone of the wrist.



Due to the movement required at the base of the thumb, you rely on your ligaments and bony structures to maintain stability. Damage or overuse can place high loads through the base of the thumb and lead to degeneration. A good point to remember is that any pressures placed through the tip of the thumb during pinching activities are multiplied by around twelve times through the CMC joint.

There are many factors that can lead to pain in the base of the thumb or thumb base Osteoarthritis including a previous injury, repetitive activity of the thumb joint, it can be inherited, and can be affected by gender – women are more likely to have Osteoarthritis than men.

Symptoms of Thumb Osteoarthritis

Pain is the primary symptom associated with thumb Osteoarthritis. Initially, pain is present with movement or activity, for example, turning a key, opening a door, lifting a cup. If the Osteoarthritis progresses, pain may be present even during inactivity or rest.

Other symptoms of thumb arthritis include:

- Difficulty gripping objects;
- Swelling, stiffness, or tenderness at the base of the thumb;
- Enlarged appearance and altered posture of the CMC joint;
- Limited range of motion.



Treatment of Thumb Osteoarthritis

Early Osteoarthritis of the thumb can be effectively managed using non-surgical treatment options. These treatments aim to reduce the pain caused by wear and repair of the joint:

- Some medicines can help to reduce inflammation, swelling and pain. You should discuss this with your GP.
- Steroid injections can be given into the joint.
- Self-help measures such as joint protection, diet, complementary therapies etc.

If you have worsening symptoms, you should discuss other options with your GP or consultant.

Hand Exercises

Exercise has many benefits. It can help to ease stiffness, improve movement in your joints, stretch out tight over-used muscles, strengthen weak underused muscles and improve posture.

To achieve the best results, repeat these exercises at least 3 times a week for at least 20 minutes each time. As part of your exercise routine always start with the Warm-Up Exercise.

How should I exercise my hand?

Warm-up first

- Place your hand in a bowl of warm water.
- Gently stretch your fingers straight and thumb wide and then make a fist.
- Move your thumb in a circular direction and after one minute you can then change the direction.
- Carry out these gentle moves for at least 5 minutes.
- Follow the warm-up with level 1 exercises.

Start with Level 1, and only progress to the next level, when the level you are on is easy & comfortable.

Watch your thumb posture as you move and try to keep the top two joints slightly bent so your thumb holds a C-shape.

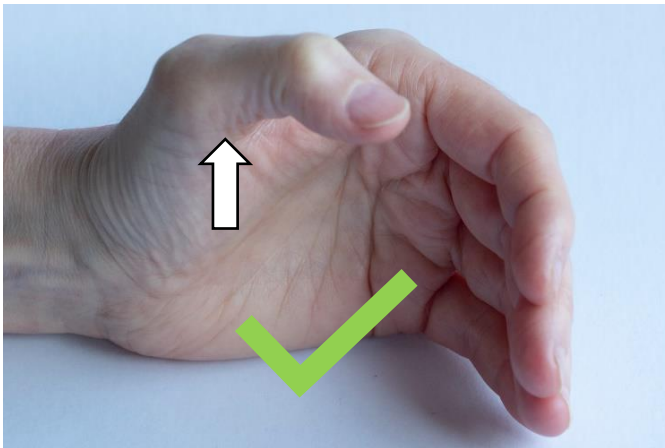
Level 1 Exercises

Exercise 1



Step 1

Rest your arm and hand on a table on the little finger side so that your thumb is on top. Ensure your wrist is straight or bent slightly back – this will make the exercises easier.



Step 2

Without help from the other hand, lift your thumb upwards as far as possible.

Hold for 10 seconds and repeat up to 10 times.

Make sure that your thumb joints **keep bent** (flexed) when you do this exercise.



INCORRECT!

Try not to overextend the thumb. This is not the right way to do this exercise.

Level 1 - Exercise 2



Step 1

Rest your arm and hand on a table on the little finger side so that your thumb is on top. Ensure your wrist is straight or bent slightly back – this will make the exercises easier.



Step 2

Keeping both joints of the thumb slightly bent, move your thumb as far away from your palm as possible while lifting your thumb up toward the ceiling.

Hold for 10 seconds and repeat 10 times.



INCORRECT!

Try not to bend the joints of the thumb back.

Level 1 - Exercise 3

Place your elbow on a table.

Put your thumb against each fingertip in turn making an 'O' shape.

Make sure your thumb joints are **always slightly bent** (flexed).



INCORRECT!

Try not to bend the joints of the thumb back.

Level 1 - Exercise 4



Place your elbow and forearm on a table.

Hold a ball of a comfortable size in your hand with your fingers and thumb in the "O" posture.



Rotate the ball around towards your thumb, using your index finger and thumb in small steps.

Try to rotate the ball 5-10 times keeping the "O" shape as you do this, you can follow the line on a tennis ball with your thumb for an added challenge.

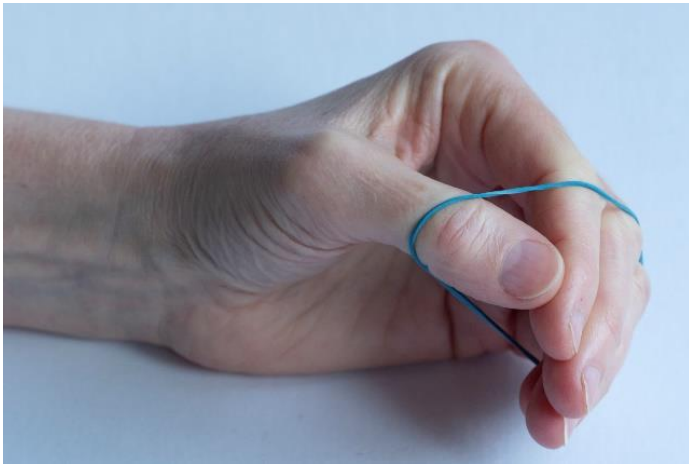
When you can easily do Level 1 Exercises then you can go straight from the warm-up to Level 2 Exercises.

Level 2 Exercises

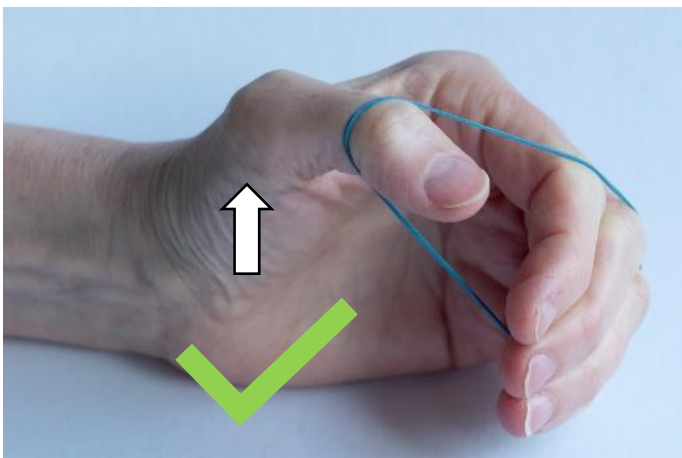
First carry out the **Warm-Up Exercise** (page 4) gently moving your hand in warm water.

Perform the rest of the Level 2 Exercises with the strongest rubber band that you can comfortably stretch around your thumb and palm.

Level 2 - Exercise 1



Start with your hand relaxed and a rubber band placed around your hand crossing around your thumb as in the picture on the left.



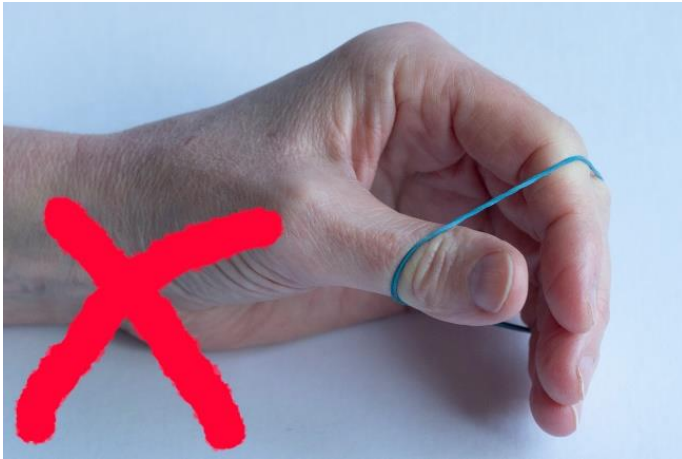
Stretch the band slowly by lifting the thumb upwards as far as possible while keeping the two joints of the thumb slightly bent.

Try to ensure that the wrist **does not bend** forwards during the movement.

Hold for 5 seconds then lower slowly and repeat up to 10 times. When you can perform this exercise easily, change to a stronger band

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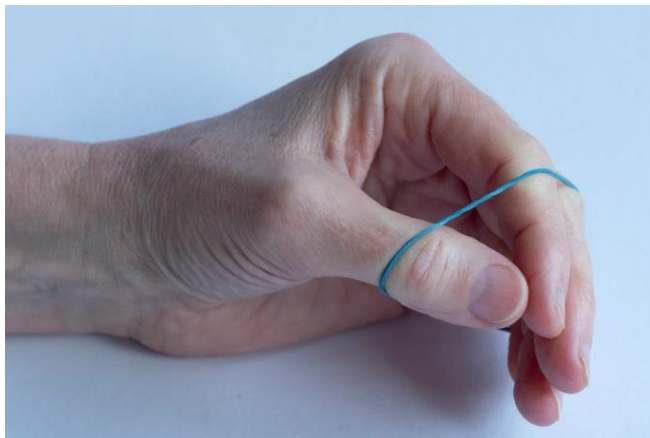
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INCORRECT!

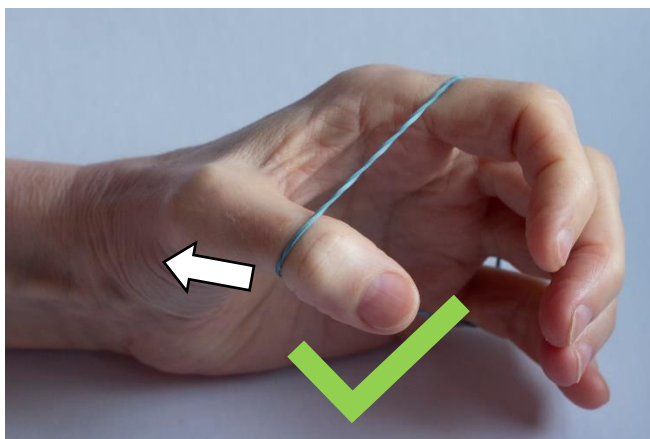
Try **not to bend** the thumb joints back or bring the wrist forward.

Level 2 - Exercise 2



Step 1

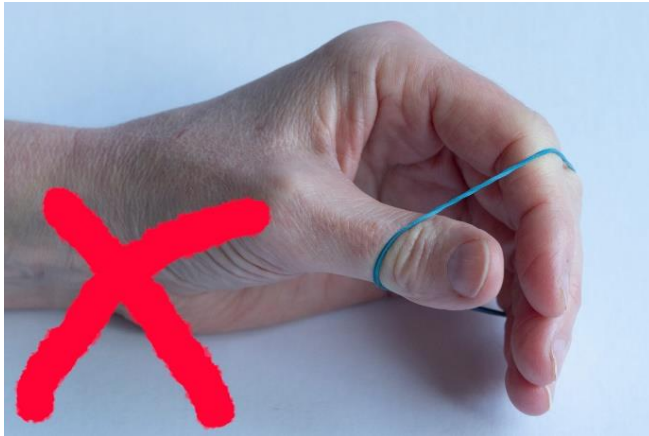
Start with your hand relaxed and a rubber band placed around your hand crossing around your thumb as in the picture on the left.



Step 2

Keep the top joints of the thumb bent and lift your thumb up towards your opposite shoulder while keeping the thumb as far away from the palm as possible.

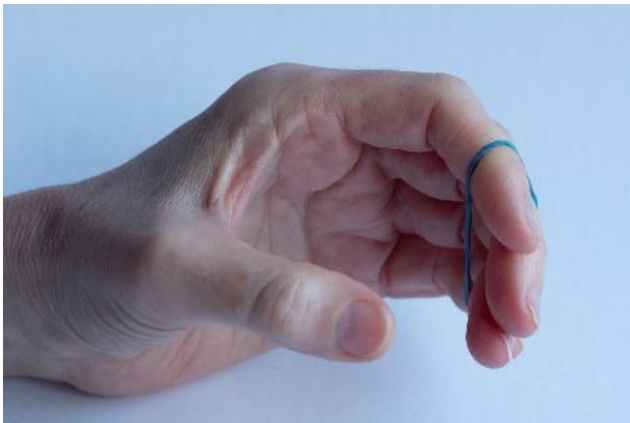
Relax the thumb back to the start position (Step 1) by **slowly** lowering the thumb while keeping both thumb joints a little bent.



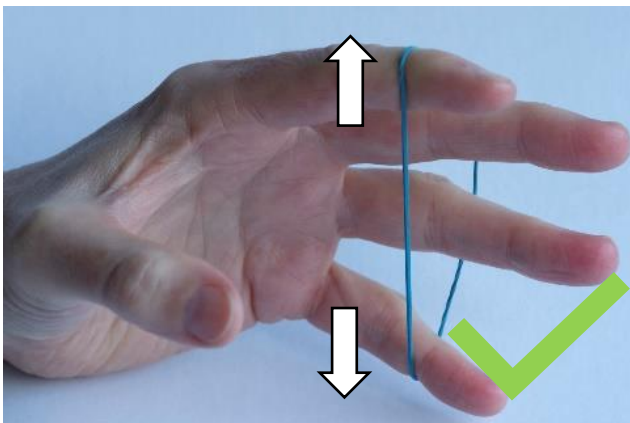
INCORRECT!

Try **not to bend** the thumb joints back or bring the wrist forward.

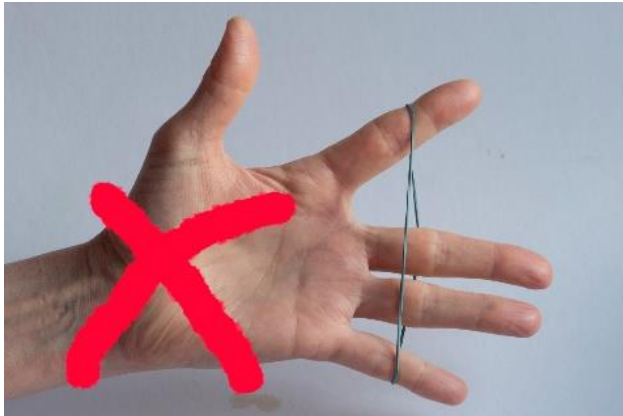
Level 2 - Exercise 3



Start with your hand relaxed and a rubber band placed around your fingers only as in the picture on the left.



Keeping your thumb in a "C" shaped bend, spread your fingers apart and you should see the muscle between your thumb and index finger bulge. Hold for 5 seconds and **slowly** relax. Repeat 10 times.



INCORRECT!

Try **not to bend** the thumb joints back or bring the wrist forward.

Level 2 - Exercise 4

Repeat Level 1- Exercise 3, touching each of the fingertips with your thumb in an "O" shape, but now add a little pressure to make it a gentle pinch while keeping the "O".

Level 3 Exercises

When you can easily do Level 2 Exercises then you can go straight from the warm-up to Level 3 Exercises.

Level 3 - Exercise 1

First carry out the **Warm-Up Exercise** (page 4).

Level 3 - Exercise 2: 4 different Pinch Tasks

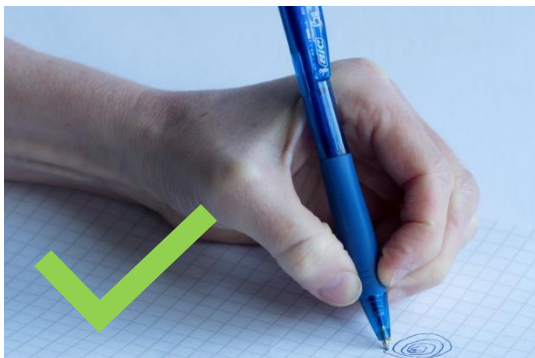
Practice these tasks where you use your thumb to pinch, (but try to use very low force) for example, writing, holding plates, opening clothes pegs, tearing sheets of paper.

When you do these tasks, the focus is on your thumb posture. Continue to **keep both joints of the thumb slightly bent**, and the **wrist slightly extended**.

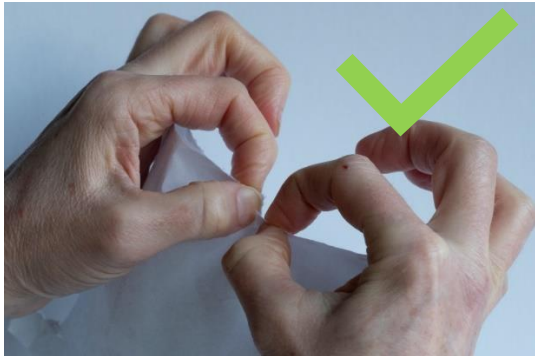
Take time to **look at your thumb** and make an effort to **keep your thumb joints in line**. Try **not to let them bend backwards**. Stretch your hand and fingers out between the tasks.

The following pictures show the correct and the incorrect way to do the pinch tasks.

1. Practice writing e.g., your name and address using the correct thumb position 5 times



2. Practice tearing a piece of paper in half using the correct thumb position 10 times



3. Practice squeezing a peg gently at first to just open it, getting firmer as you can easily hold the "O" position. Do this 5 times.



4. Practice picking up and holding a serving plate using the correct thumb position for 5 times



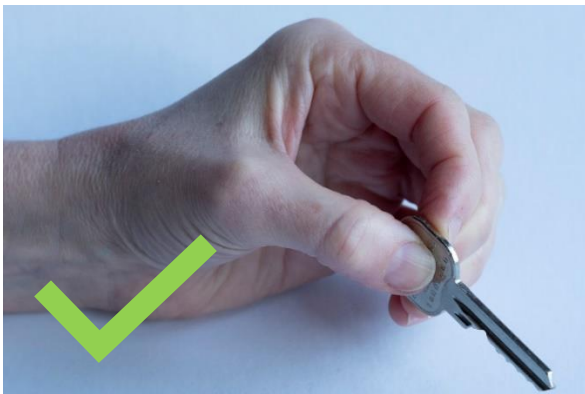
Level 3 - Exercise 3: Grip and turn Tasks.

Practice activities which involve turning or twisting, for example, putting nuts on bolts, turning keys in locks, undoing jar tops, turning taps.

During these activities work to maintain a **slight bend (flexion) of both thumb joints** and **avoid the thumb crossing in front of the palm**.

The following pictures show the correct and the incorrect way to do the **Grip and Turn Tasks**

1. Practice turning a key as if unlocking a door using the correct thumb position 10 times



Practice unscrewing and screwing up a bottle top using the correct thumb position five times.



This is the end of the thumb exercises.



It is not unusual to experience some slight discomfort or pain in your thumb after doing these exercises. Any discomfort should stop after 24 hours. If you experience discomfort in your thumb or hand when doing these exercises that does not start to feel better after 24 hours, please contact your therapist.



Exercise Goals

1. My general exercise goal is:

.....
.....

2. My specific exercise goal – What am I going to do?

.....
.....

3. My Confidence

How confident am I that **I will achieve** my specific exercise goal? Please circle the appropriate number below.

Not at all confident **1** **2** **3** **4** **5** **6** **7** **8** **9** **10** **Extremely confident**

4. My Commitment

How committed am I to **achieving** my specific exercise goal? Please circle the appropriate number below.

Not at all committed **1** **2** **3** **4** **5** **6** **7** **8** **9** **10** **Extremely committed**

5. My Exercise Action Plan

It is important to measure and record your progress, so that you can see when you are succeeding as well as to work out what you can change if your plan is not working.

Where am I going to do the exercises?

.....
.....

When am I going to do the exercises?

.....



Patient & Practitioner Agreement

I will do the exercises – my Specific Exercise Goal (? Specific and record my progress in my Exercise Diary) and bring the Exercise Diary to my next consultation.

Participant Signature:

Date:

.....

I will discuss your exercise progress with you and your task modification advice and answer any questions you have.

Therapist Signature:

Date:

.....



Barriers and Facilitators to doing Exercise

Unhelpful Things/Barriers

Places and things:

Is there anything about the things around me or the places I am in that makes it difficult to do the exercises – my Specific Exercise Goal? What **can I do** to change this?

People:

Are there any people I spend time with who make it difficult for me to do the exercises – my Specific Exercise Goal? What **can I do** to change this?

Helpful Things/Facilitators

Places and things:

Is there anything about the things around me or the places I am in that makes it easier to do the exercises – my Specific Exercise Goal? What **can I do** to use these helpful things?

People:

Are there any people I spend time with who make it easier for me to do the exercises – my Specific Exercise Goal? What **can I do** to ask them to help me?

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Thoughts and feelings:

Is there anything that I am thinking and/or feeling that makes it difficult for me to do the exercises – my Specific Exercise Goal? What **can I do** to change this?

Thoughts and feelings:

Is there anything that I am thinking and/or feeling that makes it easier for me to do the exercises – my Specific Exercise Goal? What **can I do** to encourage these thoughts and feelings?



Exercise Diary

This diary is to help you keep track of your exercise sessions, and to record your successes and difficulties. This can be used as a point of discussion with your therapist, and to help you fill in the surveys at 3 & 6 months which will ask for an honest opinion of how you have managed with the therapy programme. This diary will not be seen by the research team or your therapist (unless you show it to them).

	Notes/Dates	How many times did you do your exercises this week? Write 0 if not at all.						
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
	You can record whatever you like in this column to help you keep track, regarding exercises or changing habits to reduce thumb pain.							
Week 1								
Week 2								
Week 3								
Week 4								

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	Notes/Dates	How many times did you do your exercises this week? Write 0 if not at all.						
	You can record whatever you like in this column to help you keep track, regarding exercises or changing habits to reduce thumb pain.	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Week 5								
Week 6								
Week 7								
Week 8								

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	Notes/Dates	How many times did you do your exercises this week? Write 0 if not at all.						
	You can record whatever you like in this column to help you keep track, regarding exercises or changing habits to reduce thumb pain.	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Week 9								
Week 10								
Week 11								
Week 12								



	Notes/Dates	How many times did you do your exercises this week? Write 0 if not at all.						
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
	You can record whatever you like in this column to help you keep track, regarding exercises or changing habits to reduce thumb pain.							
Week 13								
Week 14								
Week 15								
Week 16								

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	Notes/Dates	How many times did you do your exercises this week? Write 0 if not at all.						
	You can record whatever you like in this column to help you keep track, regarding exercises or changing habits to reduce thumb pain.	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Week 17								
Week 18								
Week 19								
Week 20								

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	Notes/Dates	How many times did you do your exercises this week? Write 0 if not at all.						
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
	You can record whatever you like in this column to help you keep track, regarding exercises or changing habits to reduce thumb pain.							
Week 21								
Week 22								
Week 23								
Week 24								



With thanks to Jo Adams and Kelly Hislop-Lennie from whose permission was given to edit the original document from the OTTER trial. OTTER was funded by Versus Arthritis. This booklet includes information written and published by Versus Arthritis UK.

(Edits were Level 1 exercise 4, and Level 2 exercise 3 were added, and new photos taken)



Additional information can be obtained from the Versus Arthritis UK website (<http://www.versusarthritis.org/>)

